**Section** **845.420 Leachate Collection and Removal System**

A new CCR surface impoundment must be designed, constructed, operated and maintained with a leachate collection and removal system. The leachate collection and removal system must be designed, constructed, operated, and maintained to collect and remove leachate from the leachate collection system of the CCR surface impoundment during its active life and post-closure care period.

a) The leachate collection and removal system must:

1) Be placed above the liner required by Section 845.400 or Section 845.410;

2) Have placed above it a filter layer that has a hydraulic conductivity of at least 1 x 10-5 cm/sec;

3) Have a bottom slope of three percent or more towards the collection pipes;

4) Be constructed of:

A) Granular drainage materials with a hydraulic conductivity of 1 x 10‑1 cm/sec or more and a thickness of 24 inches or more above the crown of the collection pipe; or

B) Synthetic drainage materials with a transmissivity of 6 x 10-4 m2/sec or more;

5) Be constructed of materials that are chemically resistant to CCR and any non-CCR waste managed in the CCR surface impoundment and the leachate expected to be generated, and of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying waste and any waste cover materials and equipment used at the CCR surface impoundment;

6) Be designed, constructed and operated with collection pipes at the base of the granular material to prevent clogging with fines during the active life and post-closure care period;

7) Have collection pipes:

A) Designed such that leachate is collected at a sump and is pumped or flows out of the CCR surface impoundment;

B) With slopes that allow flow from all points within the CCR surface impoundment to the sump or drain outlet; and

C) Large enough to conduct periodic cleaning;

8) Have a protective layer or other means of deflecting the force of CCR pumped into the CCR surface impoundment;

9) Be designed and operated to minimize clogging during the active life and post-closure care period; and

10) At a minimum, the leachate collection and removal system must be operated to remove free liquids from the CCR surface impoundment at the time of closure and during post closure care.

b) The owner or operator must obtain certification from a qualified professional engineer that the design of the leachate collection system complies with the requirements of this Section and submit this certification to the Agency in the facility's construction permit application.

c) Upon completion, the owner or operator must obtain a certification from a qualified professional engineer that the leachate collection system has been constructed in accordance with the requirements of this Section and submit this certification to the Agency in the facility's initial operating permit application.